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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,069	02/09/2007	Nils Eric Stjerna	10400C-000234/US	3299
30/593 7590 05/09/2011 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER				
KELLEHER, WILLIAM J				
ART UNIT		PAPER NUMBER		
3673				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/579,069

**Applicant(s)**

STJERNA, NILS ERIC

**Examiner**

WILLIAM KELLEHER

**Art Unit**

3673

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-16, 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meutsch (U.S. Patent 1,455,847) in view of Stumpf (U.S. Patent 4,578,834).

Regarding Claim 1, Meutsch discloses a spring mattress with longitudinal strings, the spring mattress comprising: a plurality of interconnected coil springs enclosed in covers (See Figure 3), and a plurality of parallel strings arranged side by side (See inside of mattress shown in Figure 1) wherein a slit (16) is provided between at least two coil springs located adjacent to one another within the same string. Meutsch does not disclose the strings are interconnected by a surface attachment between abutting surfaces of adjacent strings. Stumpf, however, discloses "Each string is defined by a series of coil springs connected and encased by a fabric cover. The strings are connected to each other by an adhesive applied between the lines of tangency of adjacent coil springs." One of ordinary skill in the art would have recognized that adjacent strings of Meutsch could be adhered as disclosed in Stumpf in order to provide Meutsch with the predictable established function of adhesive (which is to keep strings of a mattress together). Having all of the structural elements arranged as claimed, this

combination is considered to inherently be capable of allowing an increased interjacent separation distance to be formed between said adjacent coil springs.

Regarding Claims 2 and 12, at least Figure 3 of Meutsch shows that the slits are enclosed by upper and lower parts of the string.

Regarding Claim 3, at least Figures 2 and 3 suggest that the slits are provided between all of the springs.

Regarding Claim 4, Meutsch in view of Stumpf makes obvious the apparatus of Claim 1, but does not disclose slits located between only some of the springs. However, the Examiner takes Official Notice that it is well known in the art of mattresses to vary the properties of a mattress to create "zones." Creating zones is a well known way to provide varying amounts of support to different portions of a user. Therefore, one of ordinary skill in the art would have recognized that Meutsch could be modified to create zones of varying properties to provide Meutsch with the predictable established function of zones (which is to provide varying amounts of support to different portions of a user).

Regarding Claim 5, Meutsch discloses the covers being joined on both sides of the slit to close the covers along the slit.

Regarding Claims 6 and 14, Stumpf discloses adhesive which is considered to at least suggest the use of glue. Welding is also considered an art recognized equivalent adhesion and would have been obvious to one of ordinary skill in the art.

Regarding Claims 7-9, 24-26 it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the sizes, ratios, and

dimensions claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding Claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a weldable material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding Claim 11, for the reasons stated above, Meutsch in view of Stumpf is considered to make obvious a method of manufacturing a spring mattress, the method comprising: arranging coil springs enclosed in covers in longitudinal strings, and interconnecting a plurality of parallel strings side by side by a surface attachment between abutting surfaces of adjacent strings, and providing a slit between at least two coil springs located adjacent to one another within the same string such that the slit in combination with the surface attachment allows an increased interjacent separation distance to be formed between the adjacent coil springs.

Regarding Claim 13, Meutsch in view of Stumpf makes obvious a method as claimed in claim 11, further comprising joining together a cover material on both sides along the slit to close the covers along the slit. One of ordinary skill in the art would have recognized the slit could be formed after the cover material is joined because a slit could cause the cover material to shift while it is being joined.

Regarding Claim 15, Meutsch discloses cover material over the springs and is therefore broadly considered to have been folded over the springs. The cover is joined between the springs and is therefore considered to have joining lines (above and below

the springs) and transverse joining lines between the springs, because the cover is closed at these points.

Regarding Claim 16, one of ordinary skill in the art would have recognized that the slits could be performed at the same time as the transverse joining lines to reduce the amount of time required to create the apparatus.

Regarding Claims 27-30, Meutsch discloses each string having coil springs enclosed in a continuous cover, the cover surrounding the slit is unbroken and continuous, and the slit is a cut out opening.

2. Claims 17-23, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stumpf (U.S. Patent 4,986,518) in view of Meutsch and Stumpf ('834).

Regarding Claims 17 and 20, Stumpf ('518) discloses means for arranging coil springs enclosed in covers in longitudinal strings (See Figure 2). Stumpf ('834) gives motivation to add a surface attachment between abutting surfaces (see discussion of adhesive above). Stumpf ('518) does not disclose means for creating a slit. Meutsch discloses a slit between springs. One of ordinary skill in the art would have recognized that slits (and the associated machinery needed to create them) such as Meutsch's could be added to the apparatus of Stumpf ('518) to provide Stumpf with the predictable established function of the slits (which is to allow the springs to flex in relation to one another).

Regarding Claim 18, the slit of Meutsch is completely enclosed in the string.

Regarding Claim 19, Meutsch discloses the covers being joined along the slits.

Regarding Claim 21, Stumpf ('518) discloses means for arranging a strip of a cover material so that it is folded over springs arranged in succession therebetween, means for arranging a longitudinal joining line at the open end of the strip thus folded (Stumpf shows the cover closed at the top and bottom of each spring), and means for arranging at least one transverse joining line between each pair of adjacent springs. Stumpf shows the material "pinched" between each spring, creating a transverse joining line.

Regarding Claims 22 and 23, Stumpf shows a tool (at 100U) which is movable towards the cover material and therefore it would have been obvious to make a slit tool move in the same way. It would also have been obvious to put the tool adjacent to one another, because the transverse joining line and seam are at approximately the same location on the end product

Regarding Claims 31 and 32, Meutsch discloses each string having coil springs enclosed in a continuous cover, the cover surrounding the slit is unbroken and continuous, and the slit is a cut out opening.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM KELLEHER whose telephone number is (571)272-7753. The examiner can normally be reached on Monday - Friday 9:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM KELLEHER/  
Examiner, Art Unit 3673



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